FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST 6191

FACILITY NAME:

SIERRA-PACIFIC INDUSTRIES-ABERDEEN DIVISION

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INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST 6191. The Department of Ecology (the Department) is proposing to issue this permit, which will allow discharge of wastewater to the Aberdeen Wastewater Treatment Plant. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law (RCW 90.48.080 and 90.48.160) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. This statute includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. Regulations adopted by the state include procedures for issuing permits and establish requirements which are to be included in the permit (Chapter 173-216 WAC).

This fact sheet and draft permit are available for review by interested persons as described in Appendix A—Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D—Response to Comments.

GENERAL INFORMATION	
Applicant	Sierra Pacific Industries-Aberdeen Division
Facility Name and Address	301 Hagara Street Aberdeen, Washington 98520
Type of Facility:	Sawmill with associated electrical cogeneration facility
Facility Discharge Location	Latitude: 46° 58' 27" N Longitude: 123° 46' 23" W.
Treatment Plant Receiving Discharge	Aberdeen Wastewater Treatment Facility
Contact at Facility	Name: Randy Lilburn, Area Manager Telephone #: (360) 532-2323
Responsible Official	Name: Randy Lilburn Title: Area Manager Address: 301 Hagara Street, Aberdeen, WA 98520 Telephone #: (360) 532-2323 FAX # (360) 532-9287

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

This is a new facility. A permit application and an engineering report for this project were received on March 18, 2002.

INDUSTRIAL PROCESS

This facility will saw lumber from logs. Wood waste generated in the process will eventually be burned to generate steam that will supply power to the plant and electrical power for sale. The sawmill will not discharge wastewater, but will recycle this wastewater through the plant process. Sanitary Sewer water will be discharged to the City of Aberdeen sewer system. The following table shows the electrical generation processes that generate wastewater which is eventually discharged to the Aberdeen sanitary sewer system

PROCESS	VOLUME
Cooling tower blowdown	7 gpm
Media filter backwash*	500 gal/wk
Carbon filter backwash*	500 gal/wk
Reverse osmosis concentrate*	11 gpm
Boiler bleed off*	8 gpm
Bottom Ash Transport Water	400 gal/yr

* Internal wastestream, discharges to collection tank and thence to the cooling tower

DISCHARGE OUTFALL

The discharge outfall is a pump on the sawmill site that pumps the effluent to a City of Aberdeen manhole designated Outfall 003.

PERMIT STATUS

This is a new facility.

An application for an NPDES permit was submitted to the Department on March 18, 2002 and accepted by the Department on May 20, 2002. An NPDES permit was issued on April 30, 2003. This permit was appealed to the Pollution Control Hearings Board. A stay of the permit was issued on July 9, 2003. During the hearing, it was said that the power plant was discharging cooling tower water to the City of Aberdeen Wastewater Treatment Plant. After the hearing, Sierra Pacific Industries was informed that their discharge to a POTW required another permit. A permit application for a permit issued under WAC 173-216 was received on July 22, 2003 and approved on March 24, 2003. With a maximum predicted flow of 10,080 gallons per day (0.2% of the POTW design flow) this facility is not a significant industrial user.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

This facility has never discharged under the NPDES permit. Samples have been taken of the water discharged to the City of Aberdeen for application to this proposed permit.

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the permit application and in discharge monitoring reports. The proposed wastewater discharge is characterized for the following parameters:

Parameter	Concentration
pH, S.U.	Between 8 and 9
Total Residual Chlorine, mg/L	0.2
Temperature, ºC	55 to 73
Total Copper, mg/L	0.0727
Total Chromium, mg/L	Non-detect, PQL=0.01
Total Zinc, mg/L	0.0419
Total Arsenic, mg/L	0.173
Total Suspended Solids, Bottom Ash Transport Water) mg/L	8.8

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be based on the technology available to treat the pollutants (technology-based) or be based on the effects of the pollutants to the POTW (local limits). Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not interfere with the operation of the POTW.

The minimum requirements to demonstrate compliance with the AKART standard and specific design criteria for this facility were determined in the engineering report Sierra Pacific Industries Junction City Sawmill, Industrial Wastewater Facility Engineering Report, TetraTech/KCM, revised February 2004. The more stringent of the local limits-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). There are no existing categorical permit limitations for wood fired power plants, but there are analogous limits proposed for fossil fuel fired plants and nuclear steam generation plants. These categorical limits for new source pretreatment are shown in 40 CFR 423.17. The following permit limitations are necessary to satisfy the requirement for AKART:

Pollutant	Maximum Concentration
Total Copper, µg/L	1000
Total Chromium, µg/L	200
Total Zinc, µg/L	1000
128 Prior Pollutants, less Cr and Zn, µg/L	Non detect

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In order to protect the Aberdeen Wastewater Treatment Plant from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for parameters are necessary. These limitations are based on local limits established by the Aberdeen Wastewater Treatment Plant and codified by ordinance. Applicable limits for this discharge include the following:

Parameter	Maximum Concentration
Temperature, ºC	65
pH, S.U.	Between 5 and 9
Total Suspended Solids, mg/L	350
Oil and Grease, mg/L	300
Biochemical Oxygen Demand, 5 day, mg/L	300

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, and that effluent limitations are being achieved (WAC 173-216-110).

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-216-110 and 40 CFR 403.12 (e), (g), and (h)).

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S.5. as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

PROHIBITED DISCHARGES

Certain pollutants are prohibited from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (Chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (Chapter 173-303 WAC).

DILUTION PROHIBITED

The Permittee is prohibited from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limitations, except in the case of cooling water.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to POTW permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control production or wastewater discharge in order to maintain compliance with the permit. Condition G10 prohibits the reintroduction of removed pollutants into the effluent stream for discharge. Condition G11 requires the payment of permit fees. Condition G12 describes the penalties for violating permit conditions.

PUBLIC NOTIFICATION OF NONCOMPLIANCE

A list of all industrial users which were in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters may be annually published by the Department in a local newspaper. Accordingly, the Permittee is apprised that noncompliance with this permit may result in publication of the noncompliance.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics. The Department proposes that the permit be issued for a period ending on June 30, 2005, the scheduled ending for permits in the designated Basin 2.

REFERENCES FOR TEXT AND APPENDICES

Washington State Department of Ecology.

Laws and Regulations(http://www.ecy.wa.gov/laws-rules/index.html)

Permit and Wastewater Related Information
(http://www.ecy.wa.gov/programs/wq/wastewater/index.html

APPENDICES

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on (date) and (date) in the *Aberdeen Daily World* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on (date) in the *Aberdeen Daily World* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Industrial Unit Permit Coordinator
Department of Ecology
Southwest Region – Water Quality
P.O. Box 47775
Olympia, WA 98504-7775

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 407-6285, or by writing to the address listed above.

This permit was written by Gary Anderson, P.E.

APPENDIX B—GLOSSARY

Ammonia—Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation—The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass—The intentional diversion of waste streams from any portion of the collection or treatment facility.

Categorical Pretreatment Standards—National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity—Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Engineering Report—A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample—A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial User—A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Interference— A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal and;

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local Limits—Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Maximum Daily Discharge Limitation—The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Pass-through— A discharge which exits the POTW into waters of the-State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

pH—The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User--A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)--

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug Discharge—Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate which may cause interference with the POTW.

State Waters—Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater—That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit—A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria—A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids—That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic

effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C—TECHNICAL CALCULATIONS

126 PRIORITY POLLUTANT LIST

Volatiles

1 acrolein
2 acrylonitrile
3 benzene
4 bromoform
5 carbon tetrachloride
6 chlorobenzene
7 chlorodibromomethane
8 chloroethane
9 2-chloroethylvinyl ether
10 chloroform
11 dichlorobromomethane
12 1,1-dichloroethane
13 1,2-dichloroethane
14 1,1-dichloroethylene
15 1,2-dichloropropane
16 1,3-dichloropropylene
17 ethylbenzene
18 methyl bromide
19 methyl chloride
20 methylene chloride
21 1,1,2,2-tetrachloroethane
22 tetrachloroethylene
23 toluene
24 1,2-trans-dichloroethylene
25 1,1,1-trichloroethane
26 1,1,2-trichloroethane
27 trichloroethylene
28 vinyl chloride

Acid Compounds

29 2-chlorophenol
30 2,4-dichlorophenol
31 2,4-dimethylphenol
32 2-methyl-4,6-dinitrophenol
33 2,4-dinitrophenol
34 2-nitrophenol
35 4-nitrophenol
36 3-methyl-4-chlorophenol
37 pentachlorophenol
38 038 phenol
39 2,4,6-trichlorophenol

Base/Neutral

40 acenaphthene
41 acenaphthylene
42 anthracene
43 benzidine
44 benzo(a)anthracene
45 benzo(a)pyrene
46 benzo(b)fluoranthene
47 benzo(g,h,i)perylene
48 benzo(k)fluoranthene
49 bis(2-chloroethoxy)methane
50 bis(2-chloroethyl)ether
51 bis(2-chloroisopropyl)ether
52 bis(2-ethylhexyl)phthalate
53 4-bromophenyl phenyl ether
54 butylbenzyl phthalate
55 2-chloronaphthalene
56 4-chlorophenyl phenyl ether
57 chrysene
58 dibenzo(a,h)anthracene
59 1,2-dichlorobenzene
60 1,3-dichlorobenzene
61 1,4-dichlorobenzene
62 3,3´-dichlorobenzidine
63 diethyl phthalate
64 dimethyl phthalate
65 di-n-butyl phthalate
66 2,4-dinitrotoluene
67 2,6-dinitrotoluene
68 di-n-octyl phthalate
69 1,2-diphenylhydrazine
70 fluoranthene
71 fluorene
72 hexachlorobenzene
73 hexachlorobutadiene
74 hexachlorocyclopentadiene
75 hexachloroethane
76 indeno(1,2,3-cd)pyrene
77 isophorone
78 naphthalene
79 079 nitrobenzene
80 n-nitrosodimethylamine
81 n-nitrosodi-n-propylamine
82 n-nitrosodiphenylamine
83 phenanthrene
84 pyrene
85 1,2,4-trichlorobenzene

Pesticides

86 aldrin
87 alpha-BHC
88 beta-BHC
89 gamma-BHC
90 delta-BHC
91 chlordane
92 4,4´-DDT
93 4,4´-DDE
94 4,4´-DDD
95 dieldrin
96 alpha-endosulfan
97 beta-endosulfan
98 endosulfan sulfate
99 endrin
100 endrin aldehyde
101 heptachlor
102 heptachlor epoxide
103 PCB-1242 (Arochlor 1242)
104 PCB-1254 (Arochlor 1254)
105 PCB-1221 (Arochlor 1221)
106 PCB-1232 (Arochlor 1232)
107 PCB-1248 (Arochlor 1248)
108 PCB-1260 (Arochlor 1260)
109 PCB-1016 (Arochlor 1016)
110 toxaphene

Other Toxic Pollutants

111 Antimony
112 Arsenic
113 Asbestos
114 Beryllium
115 Cadmium
116 Chromium
117 Copper
118 Cyanide
119 Lead
120 Mercury
121 Nickel
122 Selenium
123 Silver
124 Thallium
125 Zinc
126 2,3,7,8-TCDD (dioxin)

APPENDIX D—RESPONSE TO COMMENTS